

PROCESS FOR ISOTROPIC ETCHING OF COPPER  
OR ALLOY AND STRUCTURES

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ABSTRACT

Copper and copper alloys are etched to provide uniform and smooth surface by  
employing an aqueous composition that comprises an oxidant, a mixture of at least one weak  
complexant and at least one strong complexant for the copper or copper alloy, and water and has  
10 a pH of about 6 to about 12 so as to form an oxidized etch controlling layer and to uniformly  
remove the copper or copper alloy; and then removing the oxidized etch controlling layer with a  
non-oxidizing composition. Copper and copper alloy structure, having smooth upper surfaces  
are also provided.